

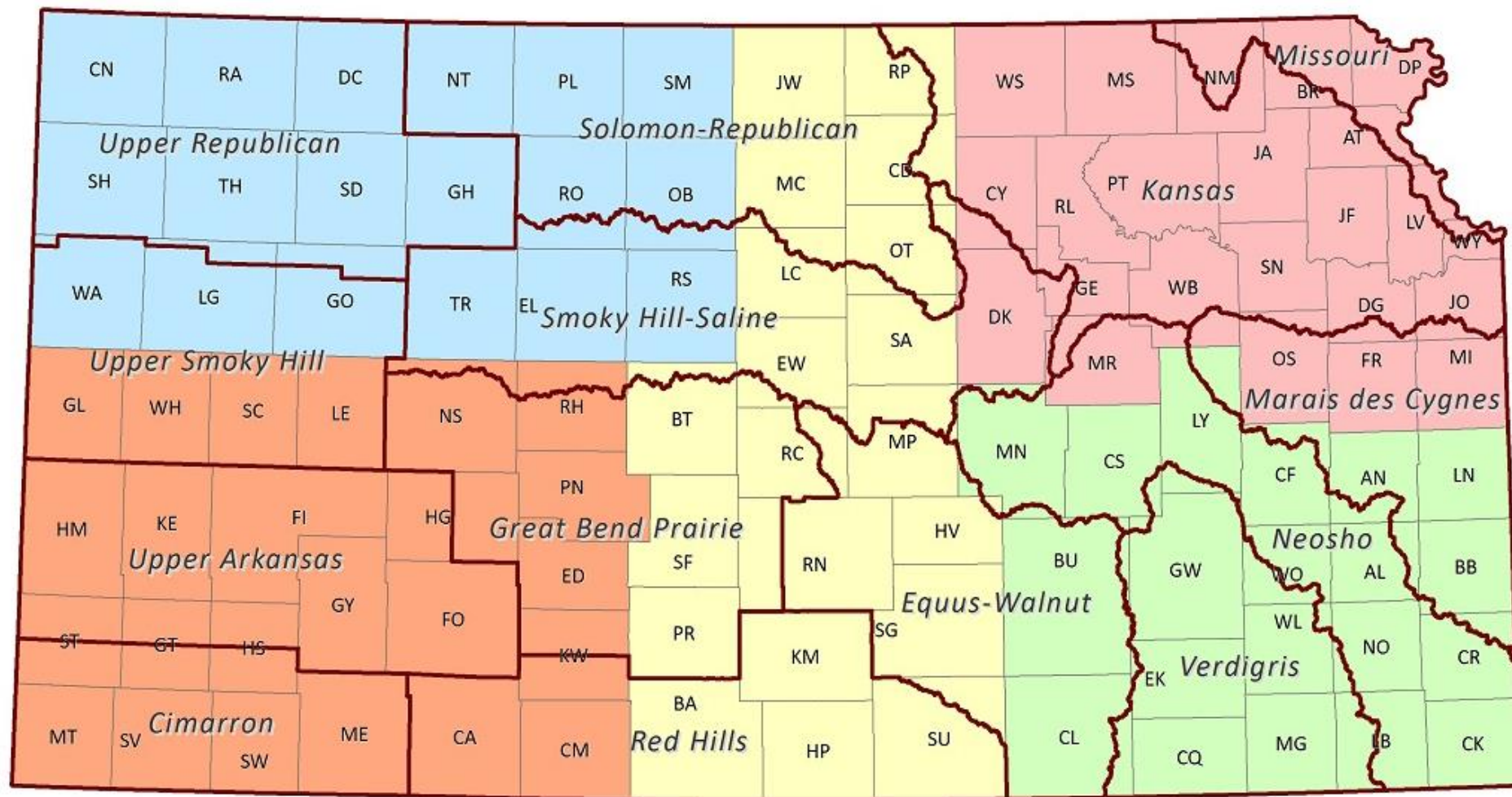
KANSAS WATER VISION IMPLEMENTATION – A REGIONAL APPROACH



SCC Spring Workshop – Area III

March 9, 2017

REGIONAL ADVISORY COMMITTEES



Kansas Conservation District Areas



KWA Approves RAC Action Plans

- Nearly 60 action plans developed by RACs in 2016
- 10 of 14 regions have watershed-based goals and action plans



BLUE RIBBON FUNDING TASK FORCE

Vision for the Future of Water Supply in Kansas

Supply

WATER

Conservation

Research

VISION

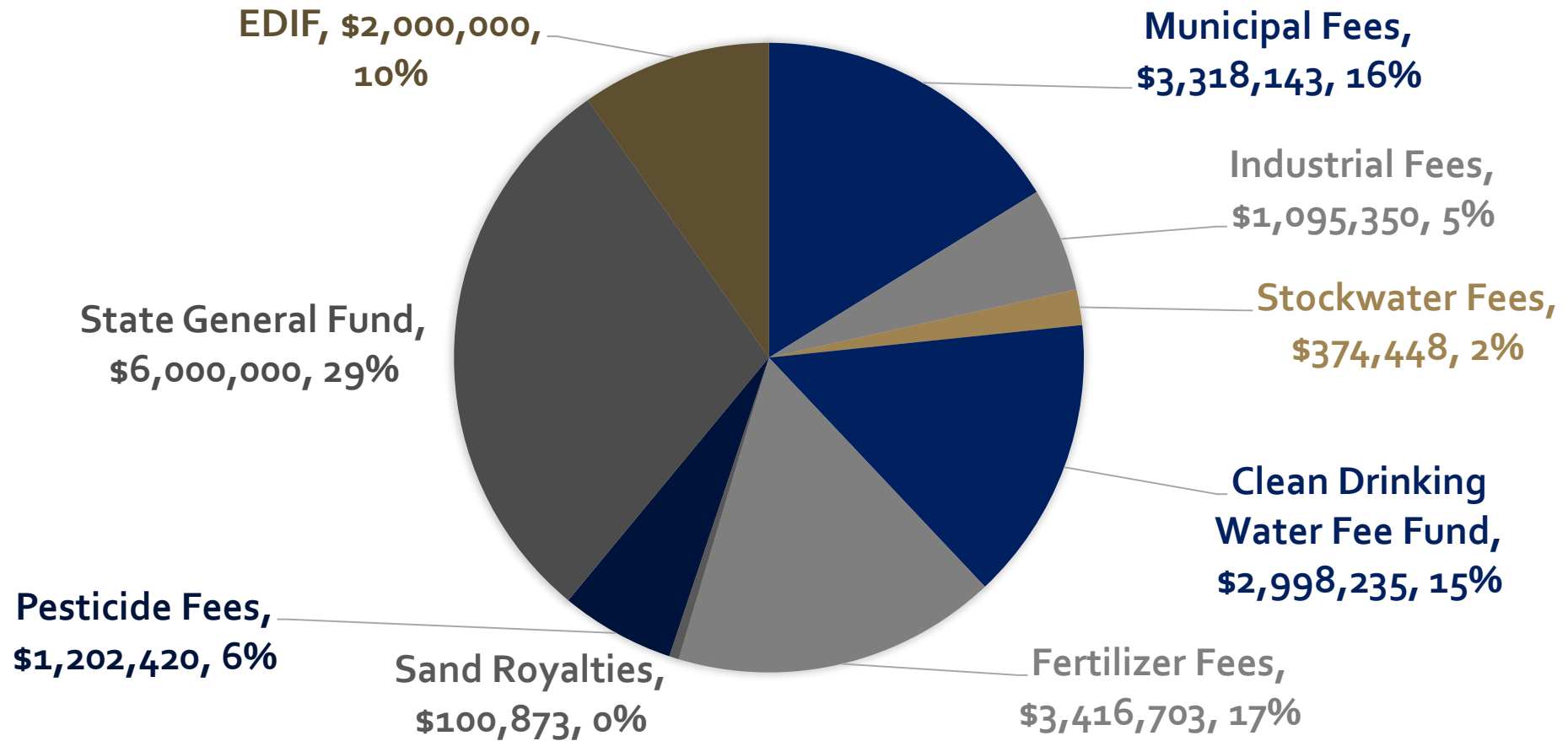
Action

Future

Technology

LOCAL

Review of existing funding and sources



Estimation of annual funding requirement to implement the Vision ~ \$55M

	Water Conservation	Water Management	Technology and Crop Varieties	Additional Sources of Water
Research		\$300,000	\$4,500,000	\$500,000
Education and Outreach	\$4,250,000		\$5,000,000	
Actions and Practices	\$21,900,000	\$100,000	\$1,500,000	\$17,500,000
Administration	Should agency administration be paid from implementation funds?			
Total	\$26,150,000	\$400,000	\$11,000,000	\$19,000,000

* Does not include estimated annual funding needs from Regional Advisory Committee Action Plans

Evaluation of various funding sources

- Increase existing State Water Plan Fund fees
- Water right fee/Irrigation fee
- Bottled drinking water fee
- Residential electric fee
- Statewide retail sales tax

Vision Implementation – New BMP \$

Key Concepts

- New funding not utilized to restore prior SWP reductions
- Projects “come towards the money”
- Kansas Basin Watershed Management System (KBWM) to serve as framework for allocation of new \$
- KWO will serve as the initial repository for new BMP funds

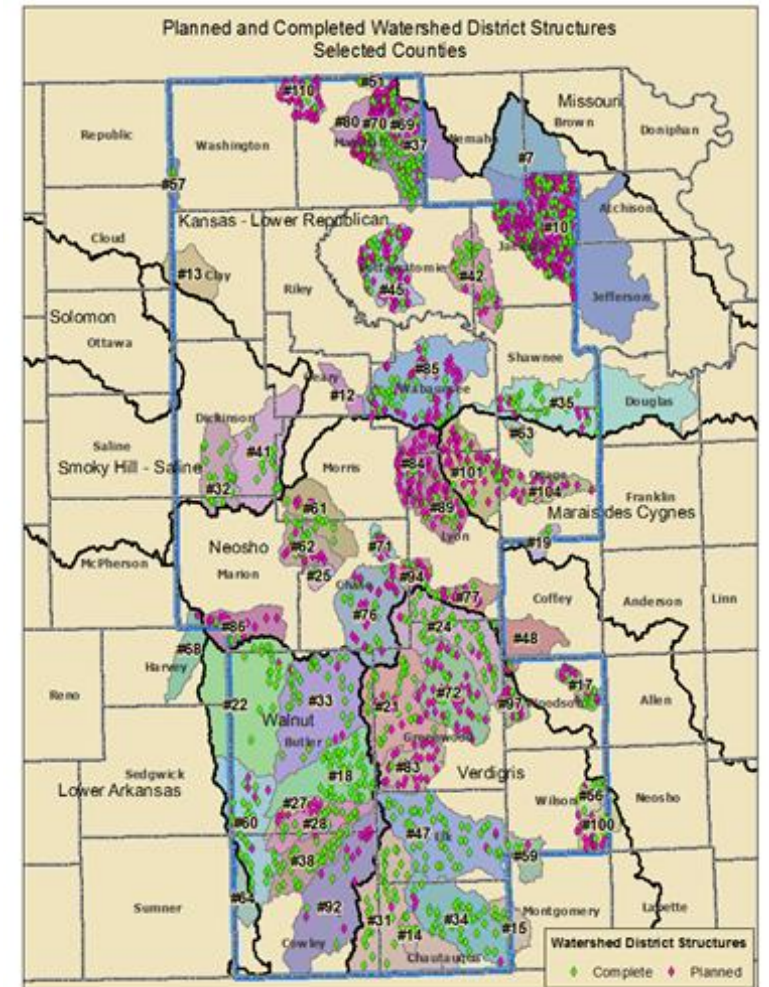
Key Concepts

- Increased technical assistance to facilitate BMP implementation is critical
- Additional on-the-ground coordination needs determined by KDHE
- Effective contract management system needed for administration of individual funded projects



KWA Project Sheet – Watershed Dams

- Update inventory of watershed dams
- Identify districts/sites that are strategically located above water supply reservoirs
- Conduct feasibility study of watershed dam construction
- Rehabilitate completed projects as needed
- \$1 - \$2 million estimated annual need



CURRENT IMPLEMENTATION ACTIONS

WATER TECHNOLOGY FARMS

Water Technology Farms



- Three Water Technology Farms established for 2016 growing season.
- KSU providing technical assistance at all three.
- Additional Farms to be added for 2017

FIELD DAY August 2, 2016
10 a.m.

Water Technology Farm — T&O Farms, LLC

South of Garden City on Hwy 83 (15.5 miles) • Turn west on T.V. Rd • Turn south on Stone Rd • Location on east side at large outbuilding (see back)

RSVP to the Kansas Water Office by July 26
1-888-KAN-WATER
kwo-info@kwo.ks.gov

AGENDA

Welcome
Tom Willis

Comments
Governor Brownback

Role of Water Technology Farms
Tracy Streeter

Introduce Partners
Technical Briefings
KSRE, Jonathan Aguilar
Seaman Crop Consulting, Loren Seaman
Dragon-Line, Monty Teeter

Tour of Farm
Lunch Provided
by Conestoga Energy Partners

SPONSORS

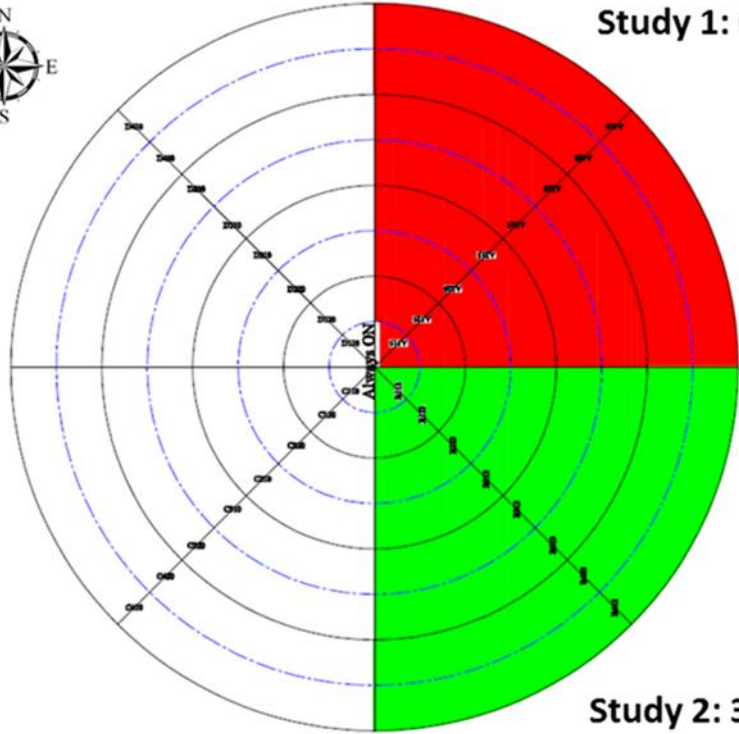
T&O Farms, LLC (Tom Willis)
Kansas Water Office
Kansas Department of Agriculture
United Sorghum Check-off Program
Kansas Corn Commission
Seaman Crop Consulting
SW Groundwater Management District #3
Conestoga Energy Partners
Teeter Irrigation
Dragon-Line
Helena
Kansas Geological Survey
Ogallala Aquifer Program
Syngenta
Hortau
Servi-Tech Expanded Premium Services
Kansas Farm Bureau
K-State- Mesonet
AquaSpy
CropMetrics
Netafim
Valley Irrigation
Presley Solutions

A public-private project for the conservation of the Ogallala aquifer implemented as part of the Kansas Water Vision

Showcase on a field scale, the latest technologies in irrigation infrastructure, irrigation water management, soil moisture management, conservation tillage, automation telemetry and other agronomic practices aimed at reducing water use.



Study 1: 600 gpm



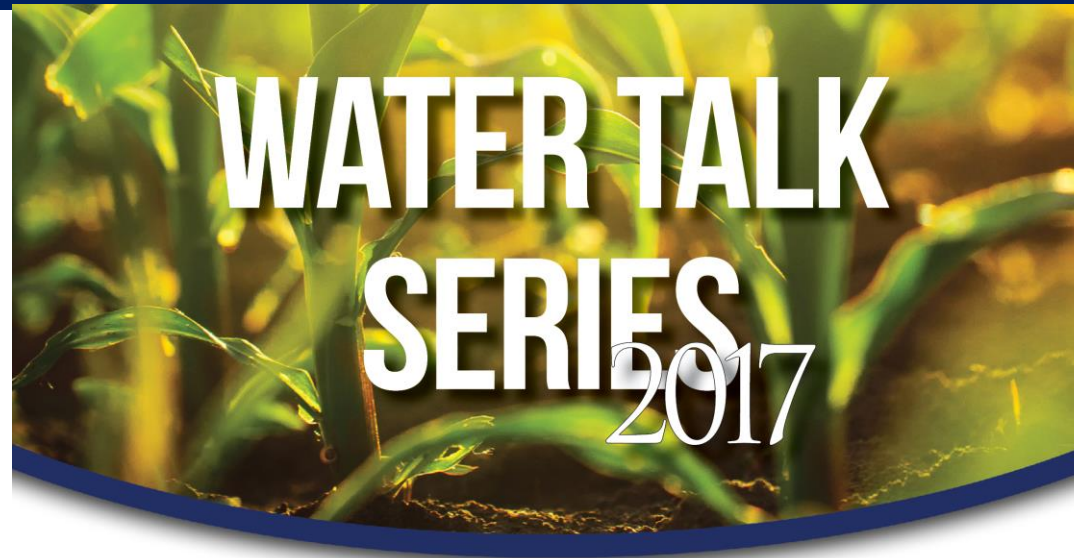
Study 2: 300 gpm



MDI Evaluation - KSU

- **2015 results comparing MDI to spray nozzles**

- 30% reduction in evaporation
- 14" applied @ 600 gpm - 8" @ 300 gpm
- 247 bu/ac @ 600 gpm – 243 bu/ac @ 300 gpm
- 10% increase in yield with MDI on the 300 gpm well
- Water evenly distributed in soil profile
- Dry soil surface
- Minimal wheel tracks



LOCATIONS

CONCORDIA

10 AM January 31 - Cook Theater
Cloud County Community College

SHARON SPRINGS

11AM CST February 2 - Wallace
County Fairgrounds - 450 Ramon

GARDEN CITY

9 AM February 14 - Finney County
Fairgrounds 4-H Building

GOODLAND

9AM MST February 1 - Northwest
Kansas Technical College Auditorium

ST. JOHN

3 PM February 13 - Odd Fellows
Lodge - 823 N Pearl St.

ULYSSES

9 AM CST February 21 - Grant
County Civic Center

TOPICS

New for 2017-Limited Irrigation Crop Insurance coverage
offered by USDA-RMA • Water Technology Farms • Regional
goals for the water future • Local groundwater level
changes • Conservation and water management tools

Kansas Water Office • 900 SW Jackson St. Ste. 404, Topeka, KS
Richard Rockel, Water Resource Planner
Richard.Rockel@kwo.ks.gov • 785-296-3185

REPUBLICAN RIVER

Republican River Compact Award Funding

- 2015 – Kansas Awarded \$5.5 million for losses from Nebraska
 - \$3.5 million credited to fund water improvement in basin.
 - \$2.5 million to KBID
 - \$1 million other water improvement projects
- Kansas Bostwick Irrigation District (KBID)
 - Funding utilized to convert open lateral lines to buried pipe for irrigation water delivery



LOWER QUALITY WATER

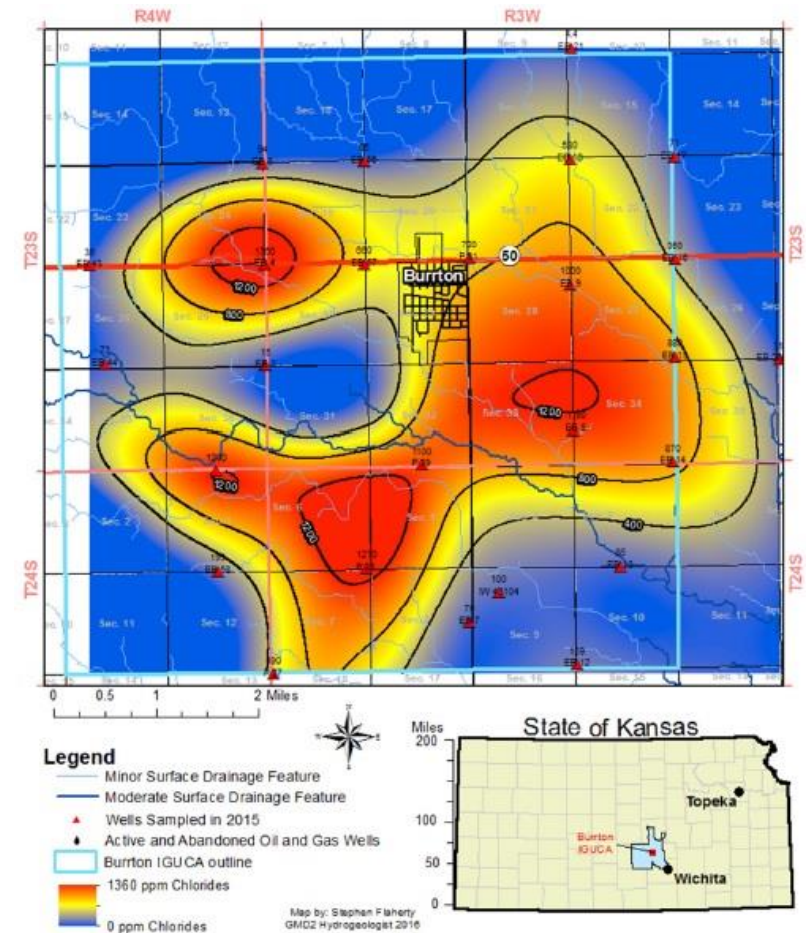
Produced Water Pilot Project

- U.S. Bureau of Reclamation WaterSMART Project Proposal Submitted
- Project location near Hardtner
- Treatment of 500 barrels of produced water/day
- Electrocoagulation treatment used to remove oil and organics
- 60 day operating period



Equus Beds Chloride Plume

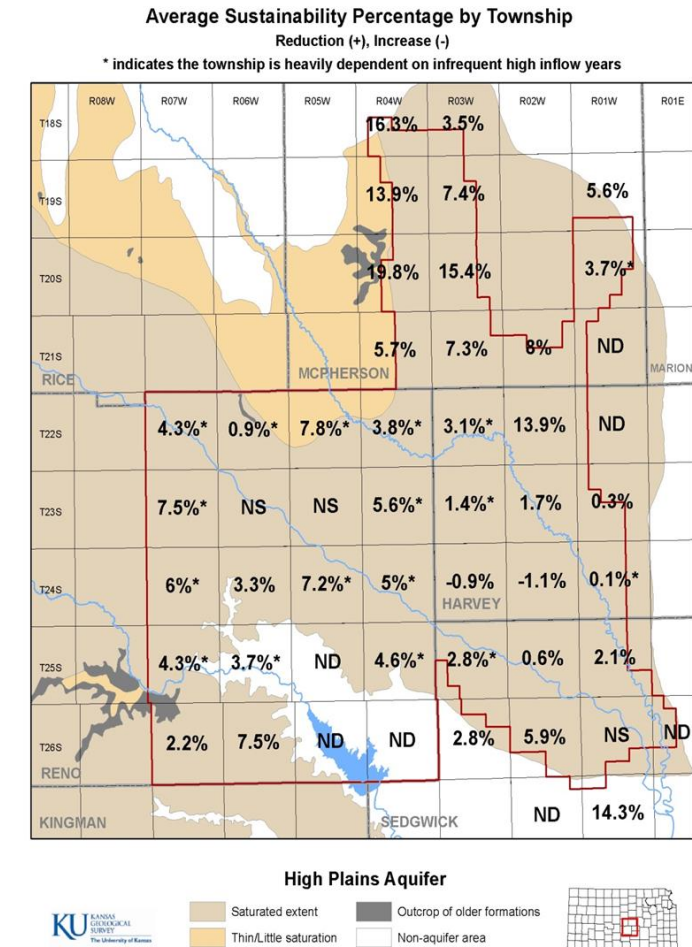
- Potential U.S. Bureau of Reclamation WaterSMART Project Proposal
- Modeling to evaluate remediation scenarios for Burrton Chloride Plume
- Plume is on the western edge of the City of Wichita's water well field in the Equus Beds



AQUIFER SUSTAINABILITY

Equus Beds Sustainability Assessment

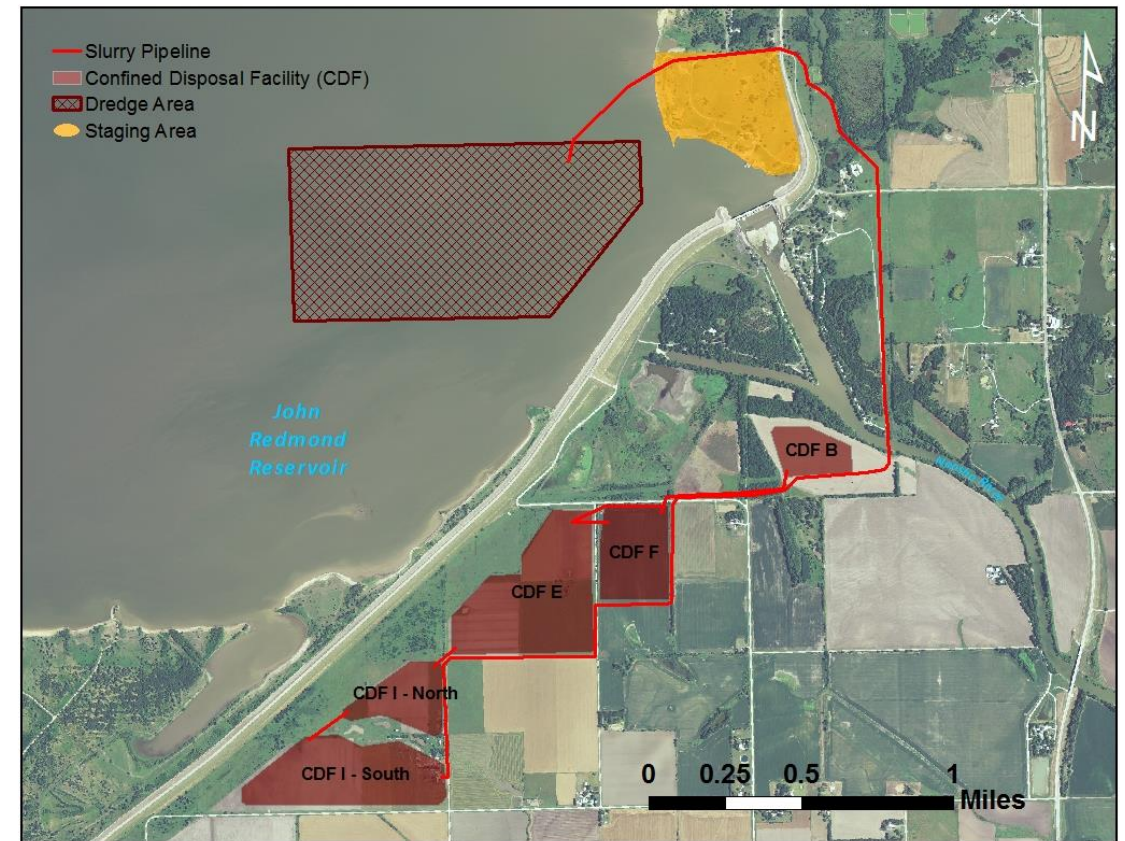
- Groundwater assessment conducted by Kansas Geological Survey for Equus Beds GMD₂
- Model results support refinement of aquifer recharge rates
- Consider results to modify safe yield calculations



RESERVOIR ACTIVITIES

John Redmond Reservoir Dredging

- Backup supply to state's only nuclear power plant
- 1st water supply dredging project at a USACE reservoir in the US
- Phase I completed ahead of schedule



John Redmond Reservoir Dredging



3,000,000 million cubic yards of deposited sediment removed



More than 1,800 acre-feet of storage restored

Restore and dispose up to three million cubic yards of sediment from John Redmond Reservoir.

Streambank Stabilization



Nutrients and Harmful Blue-Green Algae

Milford, Marion Reservoirs & others.....





QUESTIONS & DISCUSSION

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